

RESOLUTION NO. R2013-05

**A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF
WILDWOOD, FLORIDA; PROVIDING FOR THE ADOPTION OF
A POLICY MANUAL OF CROSS-CONNECTION CONTROL
AND BACKFLOW PREVENTION**

WHEREAS, the City of Wildwood has provided a mechanism for establishing a cross-connection control and backflow prevention manual in the City Code of Ordinances, Chapter 19, and

WHEREAS, the City of Wildwood may from time to time revise this manual.

NOW, THEREFORE, BE IT RESOLVED, BY THE CITY COMMISSION OF THE CITY OF WILDWOOD, FLORIDA, TO:

Hereby adopt the attached City of Wildwood, Utility Department, Policy Manual of Cross Connection Control and Backflow Prevention, dated April, 2013.

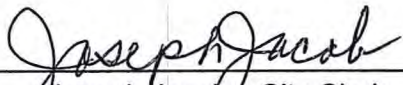
With the passing of this Resolution the new policy attached will become effective immediately upon adoption.


DONE AND RESOLVED, this 13th day of May, 2013.

CITY COMMISSION
CITY OF WILDWOOD, FLORIDA

SEAL

ATTEST:


Joseph Jacobs, City Clerk


Ed Wolf, Mayor

City of Wildwood Florida's Transportation Hub

What is a Cross-Connection Control and Backflow Prevention Program?

The purpose of a Cross-Connection and Backflow Prevention Program is to provide for the maintenance and operation of a continuing program which systematically and effectively prevents the contamination or pollution of the City of Wildwood's water distribution system due to cross-connections, as required by the Florida Department of Environmental Protection.

The goals of this program are to:

- Protect the public potable (drinking) water supply from possible contamination or pollution by isolating actual and/or potential cross-connection into the water distribution system that could create backflow into the public potable water supply.
- Promote the elimination and control of cross-connections (actual or potential) between the potable water system(s) or plumbing system(s).

What is a cross-connection?

- A cross-connection is a physical connection or arrangement of piping or fixtures between two otherwise separate systems, one of which contains potable water and the other fluids, gases or other materials through which a backflow may occur.

What is backflow?

- Backflow is the flow of water or other liquid, mixtures or substances into the City's potable water supply system from sources other than the City's water system.

How is backflow prevented?

- Backflow is prevented either by complete physical separation of piping systems or through the use of an approved backflow prevention devices. Backflow prevention devices are required to isolate a private water system, such as water lines within a commercial site, from the point of connection with the City's public potable water system. With the use of an approved backflow prevention device water can flow from the City's public water system into the private water system, but water from the private system cannot flow back into the City's public water system. Backflow prevention devices are also used to isolate fire lines, residential irrigation systems, and reclaimed water systems from the City's potable public water system.

For detailed information on the installation, inspection, repair and maintenance of backflow prevention devices or more information on Cross-Connection Control and Backflow Prevention, please refer to the City's Policy Manual of Cross-Connection Control and Backflow Prevention.

**CITY OF WILDWOOD
UTILITY DEPARTMENT**



**POLICY MANUAL
OF
CROSS-CONNECTION CONTROL
&
BACKFLOW PREVENTION**

April 2013

Preface

This manual of policies and specifications has been prepared by the City of Wildwood Utilities Department to establish an effective Cross Connection and Backflow Prevention Program in the City's utility service area in accordance with the directives of the United States Department of Environmental Protection and the State of Florida Department of Environmental Protection (FDEP). This manual has been adopted by the City Commission through a City resolution. Responsibilities for the control of cross-connections are shared by the consumer, this department and the FDEP. This manual serves as a guide to insure the safety of the public water supply system is maintained.

The City of Wildwood Utilities Department:

- Urges the review of this manual prior to the installation of a backflow prevention device.
- Believes the material in this manual will provide the consumer with an understanding of cross-connection and backflow prevention devices.
- Will ensure the policies, standards and specifications as set forth in this manual will be uniformly enforced.
- Reserves the right to update this manual as necessary due to changes in FDEP policies and regulations and/or the American Water Works Association's standards.

Questions regarding this manual or the policies and specifications contained herein, shall be directed to the City of Wildwood Utility Department at 352-330-1346.

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SECTION 1 – PURPOSE AND INTENT

1.1 Protection

To protect the public potable water supply from the possibility of contamination or pollution by isolating actual and/or potential cross-connections in the water distribution system that could create a backflow by back-pressure or back-siphoning into the public potable water supply system. (Florida Administrative Code (FAC) Chapter 62-555.360 or latest edition)

1.2 Elimination of Cross-Connections

To eliminate and control cross-connections (actual or potential) between the potable water system(s), and any other system(s) or plumbing fixture(s).

1.3 Cross-Connection Control Program

To provide for maintenance and operation of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the City's water distribution system, as required by the Florida Department of Pollution Control (FDEP). (FAC Chapter 62-555.360 or latest edition)

1.4 Causes of Backflow

Where cross-connection or potentials for cross-connections exist, prevention against backflow is required to reduce the possibility of contamination. The two major causes of contamination are back-siphoning and back-pressure.

1.4.1 Back-Siphoning

Back-Siphoning is caused by a reduced or negative pressure being created in the supply piping. The reduction of pressure in the water supply system can result in flow of water or other liquids, mixtures or other substances into the distribution pipes of a potable water supply system from a source other than its intended source. The most common causes of back-siphoning are:

- A line repair or break that occurs at a lower elevation than the service point.
- Undersized piping
- Lowered water pressure in a water main due to a high water withdrawal rate such as fire-fighting
- Water main flushing
- Water main breaks
- Reduced supply main pressure on the suction side of a booster pump

1.4.2 Back-Pressure

Back-pressure is caused by an elevation or pressure in the downstream piping that is greater than the supply pressure. Typically, the result of this difference in pressure is a reversal of the normal direction of flow. The reversal of flow can, in turn, lead to contamination of the potable water supply system. The high downstream pressures can be caused by pumps, elevation of piping, air pressure, etc.

SECTION 2 – AUTHORITY

The following authorities are the justification for establishing a cross-connection control and backflow prevention program.

2.1 Florida Regulations

The Safe Drinking Water Act, signed by President Ford on December 16, 1974, created new authority through a chain of laws and regulations that resulted in the State requirement (Florida Safe Drinking Water Act, Sections 403.850-403.864, Florida Statutes) for all potable drinking water systems to have a cross-connection control program/policy.

Rule 62-555.200 FAC, states “CROSS-CONNECTION means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quantity which may be capable of imparting contamination to the public water supply as a result of backflow. By-pass arrangements, jumper connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered to be cross-connections.

The State of Florida adopted the following policies contained in FAC Chapter 62-555

Cross-connection, as defined in Rule 62-550.200 FAC is prohibited. However, a person who owns or manages a public water system may interconnect with another public water system if that system is operated and maintained in accordance with this chapter.

Community water systems, and all public water systems that have service areas also served by reclaimed water systems regulated under Part III of Chapter 62-610, FAC shall establish and implement a routine cross-connection control program to detect and control cross-connections and prevent backflow of contaminants into the water system. The program shall include a written plan that is developed using recommended practices of the American Water Works Association set forth in the ‘Recommended Practice of Backflow Prevention and Cross-Connection Control’, AWWA Manual M14, as incorporated in rule 62-555.330, FAC.

Upon discovery of a prohibited cross-connection, public water supply systems shall either eliminate the cross-connection by the installation of an appropriate backflow prevention device acceptable to the FDEP or shall disconnect the service until the contamination source is eliminated.

(Rules of the FDEP, Chapter 62-555.360 (1), (2), and (3).)

2.2 Code of Ordinances

The City of Wildwood, Florida, Code of Ordinances, Chapter 19, Section 109 requires the installation of an approved backflow prevention devices on all service lines to customer's water system. Chapter 19, Section 106 (b) of the Wildwood Code requires compliance with this policy and the cross-connection control and backflow prevention program contained herein.

SECTION 3 – DEFINITIONS

3.1 Air-gap Separation

Air-gap separation shall mean a physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. An approved air-gap separation shall be a distance of at least two (2) times the diameter of the supply pipe measured vertically above the top rim of the vessel, and in no case less than one (1) inch.

3.2 Approved

Approved shall mean accepted by the Utility Director as meeting an applicable specification or meeting specifications of state and city codes.

3.3 Atmospheric Vacuum Breaker (AVB)

Atmospheric vacuum breaker shall mean a backflow prevention device which is operated by atmospheric pressure in combination with the force of gravity. The unit is designed to work on a vertical plane only. The one moving part consists of a poppet valve which must be carefully sized to slide in a guided chamber and effectively shut off the reverse flow of water when a negative pressure exists.

3.3 Auxiliary Water Supply

Auxiliary water supply shall mean any water supply on or available to the premises other than the water supplier's approved public potable water supply system. These auxiliary waters may include other potable water supply or natural source, such as a well, lake, stream, etc. or used water or industrial fluids. These waters may be polluted or contaminated, or they may be objectionable and constitute an unacceptable water source over which the supplier does not have sanitary control.

3.5 Backflow

Backflow shall mean the flow of water or other liquids, mixtures or substances into the city's potable water supply system from sources other than the City's water supply system.

3.6 Approved Backflow Prevention Device

Approved backflow prevention device shall mean a device that has been manufactured and tested in full conformance with applicable standards and specifications and is approved by the Utility Director. (Refer to Section 8.1 of this manual for a list of applicable standards and specifications that must be met.) An approved backflow prevention device is used to prohibit the backflow or back siphoning of water into the potable public water supply system.

3.7 Back-Pressure

Back-pressure shall mean an elevation or pressure in the downstream piping system (by pump, elevation of piping, or stream and/or air pressure) above the supply pressure at the point of consideration which would cause or tend to cause, a reversal of the normal direction of flow.

3.8 Back-Siphoning

Back-siphoning shall mean a form of backflow due to a reduction in system pressure which causes a negative or sub-atmospheric pressure to exist at a site in the water system. The reduction of pressure in the water supply system can result in the flow of water or other liquids, mixtures or other substances into the distribution pipes of a potable water supply system from a source other than its intended source.

3.9 Certified Backflow Prevention Device Tester

Certified backflow prevention device tester shall mean a person who has a current license filed with the Utility Department. The tester shall have attended and successfully completed an AWWA approved course for Backflow Prevention Device Testers, or a course endorsed by the AWWA, or other programs or training acceptable to the Utility Director and the FDEP.

3.10 Certified Backflow Prevention Device Repairer

Certified backflow prevention device repairer shall mean a person who has a current license filed with the Utility Department. The repairer shall have attended and successfully completed an AWWA approved course for Backflow Prevention Device Repairers, or a course endorsed by the AWWA, or other programs or training acceptable to the Utility Director and the FDEP.

3.11 Certified Test Gauges

Certified test gauges shall mean gauges that are calibrated and certified annually to USC standards by a testing laboratory approved by the Utility Director.

3.12 Consumer

Consumer shall mean any person, business or any other entity residing in or doing business in the city's utility service area or who by contract is bound to this manual and who is or who was connected to the city's water system or who is or was receiving water service from the city.

3.13 Contamination

Contamination shall mean an impairment of the quality of the potable water supply by compounds or other materials to a degree which creates an actual hazard to the public health.

3.14 Cross-Connection

Cross-connection shall mean any physical connection or arrangement of piping or fixtures between two otherwise separate systems, one of which contains potable water and the other, unapproved water, fluids, gases or other materials through which backflow may occur.

3.15 Double Check Valve Assembly

Double check valve assembly shall mean an assembly consisting of two independently operating approved check valves that are internally loaded, either spring loaded or internally weighted, and installed as a unit between two tightly closing resilient seated shutoff valves. Properly located resilient-seated test cocks shall be provided for the testing of each valve.

3.16 Double Detector Check Valve Assembly

Double detector check valve assembly shall mean a specifically design assembly composed of an approved double check valve assembly with a specific bypass water meter and an approved double check valve assembly all properly sized. The meter shall register accurately for low flow rates and shall total all flows.

3.17 Dual Check Assembly

Dual check assembly shall mean a device consisting of two independent check valves which have been approved by the Utilities Department for use to protect the public water system at a single customer's service where there is also a reclaimed water system service and no other backflow hazards exist. Such valves must meet the requirements of ASSE 1024.

3.18 Hazard

Hazard shall mean any liquid or contaminant in the water other than the City's potable water supply which is considered a health or pollution hazard.

3.19 Degree of Hazard

Degree of hazard shall mean an evaluation of the potential risk to public health and the adverse effect on health from the public potable water system.

3.20 Industrial Fluid

Industrial fluid shall mean any fluid or solution which may physically, chemically, biologically, or otherwise contaminate or pollute potable water if introduced into the public potable water system or customer plumbing system or potable water system. Industrial fluids may include, but not be limited to contaminated water, all types of process water and "used water" originating from the public potable water system which may deteriorate in sanitary quality; chemicals in fluid form; plating acids and alkalis; circulated cooling water connected to an open cooling tower and/or cooling waters that are chemically or biologically treated or stabilized with toxic substances; contaminated natural water used from wells, lakes, springs, streams, rivers, bays, harbors, irrigation canals or systems, etc., oil, gases; glycerin, paraffin's, caustic and acid solutions; and other liquid or gaseous fluids used in commercial/industrial type processes or for firefighting purposes.

3.21 Laboratory – Approved for Testing

Approved testing laboratory shall mean the foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California or any other testing laboratory approved by the Utility Director.

3.22 Non-Potable Water

Non-potable water shall mean any water that is not safe for human consumption or which is of questionable quality.

3.23 Pollution

Pollution shall mean the presence of any foreign substance (organic, inorganic or biological) in water, which tends to degrade its quality so as to constitute a health hazard.

3.24 Potable Water

Potable water shall mean any water which, according to recognized standards, is safe for human consumption.

3.25 Pressure Vacuum Breaker

Pressure vacuum breaker shall mean any assembly similar to an atmospheric vacuum breaker except that the checking unit “poppet valve” is activated by a spring. This type of vacuum breaker does not require a negative pressure to react and can be used on the pressure side of a valve. The assembly shall include tightly-closing resilient-seated shut off valves located at each end of the assembly and each assembly shall be fitted with resiliently-seated test cocks.

3.26 Reclaimed Water (Reuse)

Reclaimed water (Reuse) shall mean treated and disinfected effluent from a wastewater treatment plant used for irrigation, dust control, fire protection, and all other purposes permitted by FAC.

3.27 Reduced Pressure Detector Assembly

Reduced pressure detector assembly shall mean a specifically designed assembly composed of an approved reduced pressure zone backflow prevention device with a specific bypass water meter and an approved reduced zone backflow prevention device all properly sized. The meter shall register accurately for low flow and shall total all flows.

3.28 Reduced Pressure Zone Backflow Prevention Device (RPZ)

Reduced pressure zone backflow prevention device (RPZ) shall mean an assembly containing within its structure a minimum of two independently acting, approved check valves, together with an automatically operating pressure differential relief valve located between the two check valves. The first check valve reduces the supply pressure a predetermined amount, so that during normal flow and at cessation of normal flow, the pressure between the checks shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve, by

discharging to the atmosphere, shall operate to maintain the pressure between the checks less than the supply pressure. The assembly shall include tightly closing resilient-seated shut off valves located at each end of the assembly and each assembly shall be fitted with properly located resilient-seated test cocks.

3.29 Water Supplier

Water supplier shall mean the utility owner or operator of the public potable water system supplying an approved potable water supply to the public.

3.30 Water Service Connection

Water service connection shall mean the terminal end of a service connection from the public potable water system (i.e., where city loses jurisdiction and sanitary control over water at its point of delivery to consumers' water system). If a meter is installed at the end of a service connection, then the service connection shall mean the downstream end of the meter. Service connection shall also include water service connection from a fire hydrant and other temporary or emergency water service connections from the public water system. There shall be no unprotected takeoffs from the service line ahead of any meter or backflow prevention device.

3.31 Approved Water Supply

Approved water service shall mean any public water supply that has been investigated and approved by FDEP. The system must be operating under a valid permit.

3.32 Unapproved Water Supply

Unapproved water supply shall mean a water system that has not been approved for human consumption by the FDEP and/or is not operating under a valid permit.

3.33 Consumer's Water System

Consumer's water system shall include any plumbing and/or water system located on consumer's premises, whether supplied by a public water system or an auxiliary water supply. The system or systems may be either a potable water system or an industrial piping system.

3.34 Consumer's Potable Water System

Consumer's potable water system shall mean that portion of the privately owned potable water system lying between the water service connection and the consumer's point of use. This system will include all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, store or use potable water.

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3.35 Public Potable Water System

Public potable water system shall mean the City of Wildwood Utilities' water system or any publicly or privately owned water system operated as a public utility under a valid permit from FDEP and other applicable regulatory agencies to supply potable water for domestic purposes. This system shall include all sources, facilities and appurtenances between the source and the water service connection such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, treat or store water for public consumption or use.

3.36 Used Water

Used water shall mean any water supplied by a water supplier from a public potable water system to a consumer's water system after it has passed through the water service connection and is no longer under the control of the water supplier.

SECTION 4 – Records and Enforcement

4.1 Responsibility

4.1.1 Water Purveyor (Supplier)

Under the Safe Drinking Water Act of 1974 and rules of the FDEP Chapter 62-555.360, relating to cross-connection, the water supplier has the primary responsibility of maintaining a cross-connection control program to prevent water from unapproved sources, or any other substances, from entering the public potable water system. Upon detection of a prohibited cross-connection, the Utility Director shall either eliminate the cross-connection by requiring the installation of an appropriate approved backflow prevention assembly or device, or immediately discontinue service until the contamination source is eliminated.

4.1.2 Consumer

The consumer's responsibility starts at the point of delivery from the public potable water system and includes all of the consumer's water systems. The consumer is required to install, operate, test and maintain approved backflow prevention assemblies as directed by the Utility Director in accordance with City Codes and Ordinances, this policy and other applicable regulations. The consumer shall maintain records of all testing and repairs in accordance with City Codes and Ordinances.

In the event of an accidental contamination or pollution of the public or consumer's potable water system due to backflow on or from consumer's premises, the consumer shall promptly take steps to confine further spread of pollution or contamination within the consumer's premises, and is required to immediately notify the Utilities Department of the hazardous condition.

Nothing herein shall relieve the consumer of the responsibility of conducting, or causing to be conducted, periodic surveys of water use practices on their premises to determine where there are actual or potential cross-connections in the public potable water system or the consumer's potable water system.

4.2 Enforcement Policy

No water service connection to any premises shall be installed or maintained by the City of Wildwood Utilities Department unless the water supply is protected as required by Federal, State and Local Laws and Ordinances and this adopted policy.

Service of water to any premises shall be discontinued by the Utility Director if a backflow prevention device required by this policy is not installed, tested, and maintained, or if it is found that a backflow prevention device has been removed, bypassed, or an unprotected cross-connection exists on the premises. In the event of a hazardous situation where contaminants are actually in the process or suspected of entering the distribution system of the public potable

water supply, the Utility Director is authorized to take immediate steps deemed necessary to correct the hazardous condition. This shall include the right to immediately discontinue potable water service to the premises where a hazardous condition may occur. Such emergency steps, including discontinuance of potable water service, may be taken without advance notification to the consumer. In any case of discontinuance, service shall not be restored until such conditions or defects that led to the discontinuance of service are corrected at the consumer's expense.

4.3 Violations

Submission by any person of any false statement or misrepresentation in any application, record, report, plan or other document filled or required by this policy shall constitute a violation. Any person who had not complied with Federal, State and Local Laws or Ordinances regarding cross-connection control shall be considered in violation of the conditions of water service. Any person not complying with the policies and guidelines within the City of Wildwood's Policy Manual of Cross-Connection Control and Backflow Prevention shall be in violation.

4.4 Written Notice

Upon receipt of written notice that an approved backflow prevention device is required at a consumer's water connection, the consumer shall immediately install such device at the sole expense of the customer.

4.5 Auxiliary Water Supply

The public water system shall be protected against backflow and back siphoning by the installation of an approved backflow prevention device if an auxiliary water supply is found which may or may not be safe in bacteriological or chemical quality. The type of backflow prevention device installed shall be appropriate for the potential degree of hazard.

4.6 Industrial Fluids

If any industrial fluids or other objectionable substances are handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected against backflow and back siphoning. This protection shall include the installation of an approved backflow prevention device in the service line appropriate for the potential degree of hazard. Protection shall also apply to the handling of process water and waters originating from the public water system, which have been subject to deterioration in quality.

4.7 Internal Cross-Connection

If an internal cross-connection(s) cannot be permanently corrected and controlled, or undefined plumbing and piping arrangements exist or where entry to all portions of the premises is not readily assessable for inspection purposes, the public water system shall be protected against backflow and back siphoning from the premises by the installation of an approved backflow prevention device in the service line.

4.8 Installation

Backflow prevention devices shall be installed at the direction of the Utility Director or a designated representative at the consumer's meter, property line of a consumer, or at a designated location.

4.9 Records

Records concerning installation and testing shall be kept on-site and assessable for a period of not less than ten (10) years. The Utility Director or designated representative shall be permitted reasonable access to these records as required for the purpose of monitoring compliance with City Codes and Ordinances.

SECTION 5 – Inspections

5.1 Frequency

Due to changes in models or components of equipment, methods of manufacturing and additions to plants, buildings, etc., water use requirements undergo continual change. As a result, new cross-connections may be installed and existing protection may be bypassed, removed or made otherwise ineffective; therefore, an annual, biannual or more frequent detailed inspection of all water usage is required. In addition, all new building construction shall be plan checked and inspected during installation by the City of Wildwood Utility Department to insure conformance with the City's cross-connection control (containment and isolation) requirements.

5.2 Proposed Construction

All construction plans and specifications for proposed new facilities shall be made available to the City of Wildwood Utility Department to review for conformance with cross-connection control requirements. Evaluation shall include a determination of the degree of possible cross-connection hazards and what approved backflow prevention devices are required and coordination on the proper location for the device. Plans will not be approved until they meet backflow prevention requirements found in this policy. During construction, field inspections will be made to confirm proper installation of backflow prevention devices. These inspections will also serve to identify hazards that may not have been apparent during plans review or that were introduced during construction.

5.3 Existing Development

In order to determine the degree of hazard to the public potable water system, a survey will be made of the customer's presently installed water system. This survey is intended to establish the water uses on the premises, check for the existence of cross-connections, and determine the availability of auxiliary or non-potable water supplies. Should any assembly or plumbing changes be required, those corrections shall be made at the customer's expense. A follow-up inspection will be made of the same site at a later date.

SECTION 6 – Degree of Hazard and Type of Protection

6.1 Degree of Hazard

Hazard definitions are as follows:

6.1.1 Non-Potable Water supply

Non-potable water supply is an auxiliary water supply as defined in Section 4.5 of this annual. The public water supply system shall be protected by an approved reduced pressure zone backflow prevention device.

6.1.2 Objectionable but not Hazardous

Water or substance(s) present that would be objectionable if introduced into the potable water system but not hazardous to public health. The public water supply system shall be protected by an approved double check valve assembly unless it is a condition specifically listed under Section 6.2 of this manual.

6.1.3 Actual or Potential Hazard

An actual or potential hazard is defined as any material dangerous to health that is handled in such a fashion as to create an actual or potential hazard to the public water system. The public water system shall be protected by an approved reduced pressure zone backflow prevention device.

6.2 Type of Protection Required

The following are the facilities and/or conditions under which backflow prevention devices will be required and the type of protection required for each:

6.2.1 Commercial, Industrial and Multi-Family

Reduced pressure zone backflow prevention devices shall be required on all commercial, industrial and multi-family developments.

6.2.2 Private Potable Water System

Double detector check assembly backflow prevention devices shall be required at the point of entry to private potable water systems.

6.2.3 Fire Lines

Reduced pressure zone detector assemblies shall be required on all fire lines using chemical injection. Double detector check assemblies will be allowed, in place of reduced pressure zone detector assemblies, on fire lines that do not use chemical injection. Fire lines shall be isolated from the potable system at the property line.

6.2.4 Residential Irrigation Lines

The potable water supply to irrigation systems shall be protected against backflow by a pressure type vacuum breaker or a reduced pressure principle backflow prevention device. Where chemicals are introduced into the system, the potable water supply shall be protected by a reduced pressure principle backflow prevention device.

6.2.5 Hazardous Material On-Site

Reduced pressure zone backflow prevention devices shall be required at the connection to the public water supply system for all facilities which use or store hazardous materials on-site.

6.2.6 Reclaimed Water System

Unless a greater level of backflow prevention is required, dual check assemblies shall be installed at all potable water and reclaimed water meters for single family residential sites with reclaimed water service.

6.3 Actual or Potential Cross-Connection

Any uncontrolled cross-connection, either actual or potential, to the potable water system shall be protected by an approved reduced pressure zone backflow prevention device at the service line connection.

6.4 Restricted Premises (Security)

Any premises where security requirements or other prohibitions or restrictions exist and it is impossible or impractical to make complete in-plant cross-connection survey, the potable water system shall be protected against backflow and back siphoning by an approved backflow prevention device at the service line connection. In this case, maximum protection will be required. An approved reduced pressure zone backflow prevention device shall be installed in each service to these premises.

6.5 Internal Protection

This policy does not include specific provisions to provide internal protection for private water systems. Consumers should take additional steps to evaluate plumbing and check for internal cross-connections in order to further protect themselves. Refer to applicable standards for guidelines on the assessment of hazards and selection of assemblies for internal protection.

SECTION 7 – Reclaimed Water Installation Program

7.1 Design Requirements

The City of Wildwood reclaimed water system is regulated by the FDEP Chapter 62-610, FAC. Specific requirements affecting the design and construction of reclaimed water systems are as follows:

7.1.1 Cross-Connection Control

Cross-connections between reclaimed water and potable water are specifically prohibited. (ref. 62-610.419 FAC)

An approved backflow prevention device shall be installed on any potable water line serving property also served by reclaimed water.

7.1.2 Pipeline Separation Distances

Maximum separation of reclaimed water lines and domestic water lines shall be practiced. A minimum horizontal separation of three (3) feet (outside to outside) shall be maintained between reclaimed water lines and either potable water mains or sewage collection lines. (ref. 62-610.469 (7) FAC)

Minimum vertical separation between reclaimed water lines, potable water lines and sewage lines shall be maintained in accordance with Chapter 62-604.400 FAC and Chapter 62-555.314 FAC. At utility crossings between such pipes, the pipes shall be arranged in accordance with Chapter 62-604.400 FAC and Chapter 62-555.314 FAC.

7.1.3 Setback Requirements

All reclaimed water irrigation sites and transmission facilities must be a minimum of seventy-five (75) feet from potable water supply wells that exist or have been approved by the FDEP. No setback distances are required from non-potable water supply wells. (ref. 62-610.471 FAC)

7.1.4 Signage and Coding

The public shall be notified of the use of reclaimed water. This shall be accomplished by the posting of advisory signs, notes on scorecards, or by other means. Advisory signs shall include the text “DO NOT DRINK” in English and Spanish along with the equivalent standard international symbol. (ref. 62-610.468 FAC)

All reclaimed water transmission lines shall be color coded and/or labeled to specifically identify the piping as reclaimed water lines. The color purple pantone shall be used in the color coding of reclaimed water piping.

7.1.5 Use of Reclaimed Water

The use of reclaimed water is regulated by Chapter 62-610 FAC. Reclaimed water requires specific authorization by the Utility Director.

7.1.6 Prohibited Uses of Reclaimed Water

The regulations in Chapter 62-610 FAC specifically prohibit the use of reclaimed water to fill swimming pools, hot tubs or wading pools. In addition, reclaimed water lines are specifically prohibited from entering a dwelling unit except for a specifically approved use. The use of reclaimed water for any purposes other than those allowed by Chapter 62-610 FAC is prohibited.

There shall be no above ground hose bib connections to the reclaimed water system. All hose bib connections must be in below grade, locked vaults that are clearly labeled as being non-potable.

Failure to comply with the regulations governing reclaimed water shall be cause of discontinuation of reclaimed water service, and other appropriate penalties.

7.2 Testing and Inspection

All application for reclaimed water service must receive a site inspection prior to activation. All sites receiving reclaimed water must have an approved backflow prevention device on the incoming potable water supply line as referenced in this policy. No reclaimed water service shall be activated without an approved backflow prevention device properly installed. All backflow prevention devices shall have certified inspections and operational tests as described in Section 8 of this manual.

SECTION 8 – Approval, Testing and Repairs of Backflow Prevention Devices

8.1 Approved Backflow Prevention Devices

Any backflow prevention devices required herein shall be of a manufacturer, model, and size approved by the Utility Director. The term, approved backflow prevention device, shall mean a device that has been manufactured in full conformance with the standards established by the AWWA entitled: AWWA C511 Standards for Reduced Pressure Principle and AWWA C510 Double Check Valve Backflow Prevention Devices, latest adopted version.

Backflow prevention devices must have the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California, or other approved testing laboratory.

The listed backflow prevention devices that are recognized by the utility shall be in compliance with the standards set forth by the following agencies:

- FDEP rule Nos. 62-555.330 and 62-555.335.
- City of Wildwood Code of Ordinances Chapter 19.
- AWWA - # C510 & C511
- American Society of Sanitary Engineers (ASSE) - #1001, 1011, 1012, 1013, 1015, 1020, 1024, 1047, & 1048.
- University of Southern California, USC Foundation for Cross-Connection Control and Hydraulic Research Manual.
- Southern Building Code Congress/International Plumbing Code (SBCC/IPC)
- American National Standards Institute (ANSI) - #DIN EN 1717 and DIN EN 12729.

All devices will be tested for compliance with the standards as described above.

Sample standard drawings of some of the approved backflow prevention devices are included in Appendix A.

8.2 Testing of Backflow Prevention Devices

It shall be the duty of the consumer at any premises where backflow prevention devices are installed to have certified inspections and operational tests made at least once per year. In those instances where the Utility Director deems the hazard to be exceptional, additional certified inspections may be required at more frequent intervals. Additionally, all new backflow prevention devices are to be tested directly upon installation. These inspections and tests shall be at the expense of the consumer and shall be performed by a certified tester, approved by the utility department, using certified gauges. A list of certified testers will be provided by the utility department upon request.

It shall be the duty of the consumer to conform to scheduled testing. The customer shall notify the utility department, in writing, at least 48 hours prior to the occurrence of tests of protective devices in order that the City may have a representative witness the tests, if so desired.

8.3 Repair of Backflow Prevention Devices

If deficiencies are noted during the test, such devices shall be repaired, overhauled, or replaced at the expense of the consumer by a certified repairer approved by the Utility Director. Upon completion of any repairs, overhauls, or replacement of a device, an operational test shall be performed before the system is put back into service. Record of such tests, repairs, overhaul, and replacements shall be maintained by the utility department.

8.4 Records, Test and Repair Reports

Copies of written reports, summaries, or other communications relating to this cross-connection control program or sanitary surveys of the system conducted by the utility department, by a private consultant, or by any local, State, or federal agency, shall be maintained by the utility department for a period of not less than ten (10) years. (ref. Chapter 62-555.720(3) FAC).

SECTION 9 – Installation requirements for Backflow Prevention Devices

All backflow prevention devices shall be installed in strict accordance with the manufacturer's installation instructions and the following guidelines. In addition, all installations shall conform to the following minimum requirements:

9.1 Location and Access

Backflow prevention devices shall be installed on the discharge side of the meter or as close as possible to the point of connection with the public potable water system. For the purpose of testing, repair and maintenance, access to ALL backflow prevention devices shall be unobstructed.

9.2 Support

The device shall be adequately supported to prevent the assembly from sagging.

9.3 Flushing

Pipe lines shall be thoroughly flushed to remove foreign material and debris before installing the device.

9.4 Parallel Backflow Device

If a continuous flow is required during backflow device servicing and testing, then two (2) backflow devices connected in parallel will be required.

9.5 Reduce Pressure Backflow Prevention Device

All reduced pressure zone backflow prevention device installations shall meet the following requirements:

- Device shall be installed a minimum of twelve (12) inches above the ground or the maximum flood level, whichever is the highest. DEVICE MAY NOT BE BURIED.
- Device shall be installed in the horizontal position unless otherwise recommended by the manufacturer and approved by the Utility Director.
- No galvanized pipe or fittings are allowed.

9.6 Reduced Pressure Zone Detector Assembly

All reduced pressure zone backflow detector assembly installations shall meet the following requirements:

- Device shall be installed a minimum of twelve (12) inches above the ground or the maximum flood level, whichever is the highest. DEVICE MAY NOT BE BURIED.
- Device shall be installed in the horizontal position unless otherwise recommended by the manufacturer and approved by the Utility Director.
- No galvanized pipe or fittings are allowed.

9.7 Double Detector Check Assembly

All double detector check assembly installations shall meet the following requirements:

- Device shall be installed a minimum of twelve (12) inches above the ground or the maximum flood level, whichever is the highest. DEVICE MAY NOT BE BURIED.
- Device shall be installed in the horizontal position unless otherwise recommended by the manufacturer and approved by the Utility Director.
- No galvanized pipe or fittings are allowed.

9.8 Pressure Vacuum Breaker Assembly

All pressure vacuum breaker assembly installations shall meet the following requirements:

- Device shall be installed a minimum of twelve (12) inches and a maximum of sixty (60) inches (5 feet) above the highest piping outlet.
- Assembly shall not be subject to back pressure.
- No galvanized pipe or fittings are allowed.
- Shall be installed upstream of control valves.

9.9 Double Check Assembly

All double check assembly installations shall meet the following requirements:

9.9.1 Standard Installation

- Device shall be installed a minimum of twelve (12) inches above the ground or the maximum flood level, whichever is the highest. DEVICE MAY NOT BE BURIED.
- Device must not be locked up or located behind a fence.
- Device shall be installed in the horizontal position unless otherwise recommended by the manufacturer and approved by the Utility Director.
- No galvanized pipe or fittings are allowed.

9.10 Dual Check Assembly

All dual check assembly installations shall meet the following requirements:

- The device is applicable only on low hazard domestic installation.
- Device is attached to outlet side of meter in meter box.
- Device must have union type fittings on discharge side of meter.

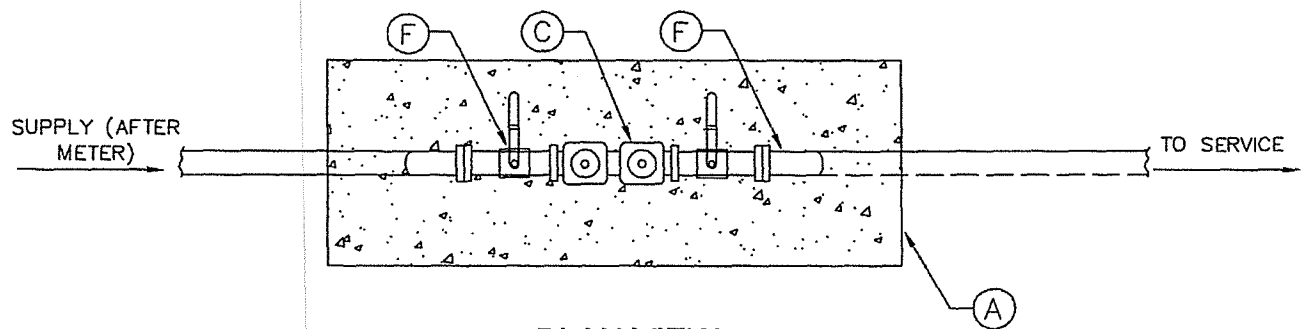
APPENDIX A
Backflow Prevention Device
Standard Drawings

APPENDIX B

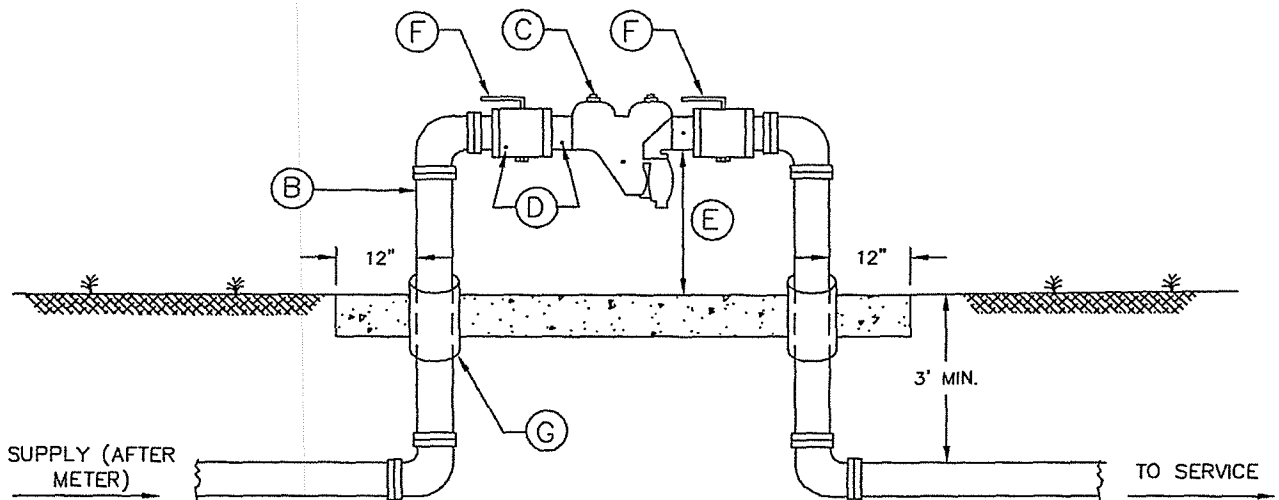
Forms

C:\Users\bphillips\Documents\Utility Department\Cross-Connection Control\Cross connection back flow prevention policy.docx

Drawing name: M:\CADD\AUTODESK\2007\Library\BLOCKS\Details\Wildwood\WATER\W-17 Reduced Pressure Backflow Preventer.dwg Model Mar 24, 2011 9:52am by: chris.malone



PLAN VIEW



SECTION

- (A) REINFORCED 4" THICK CONCRETE PAD WITH ONE LAYER 6"x6" WWF (3' WIDE)
- (B) TYPE "L" OR "K" HARD COPPER OR BRASS (NO GALVANIZED)
- (C) REDUCED PRESSURE BACKFLOW PREVENTER FEBCO MODEL 825Y OR APPROVED EQUAL
- (D) TEST COCKS
- (E) 12" MIN. - 18" MAX. CLEARANCE
- (F) RESILIENT SEAT GATE VALVE OR BALL VALVE
- (G) SLEEVE AROUND PIPE TO PROTECT IT FROM CONCRETE

NOTES:

ALL RIGID PIPE AND FITTINGS, NO PVC ABOVE GROUND



CITY OF WILDWOOD
100 NORTH MAIN STREET
WILDWOOD, FLORIDA 34785
(352) 330-1330

SCALE
NONE
LATEST REVISION
03-24-11

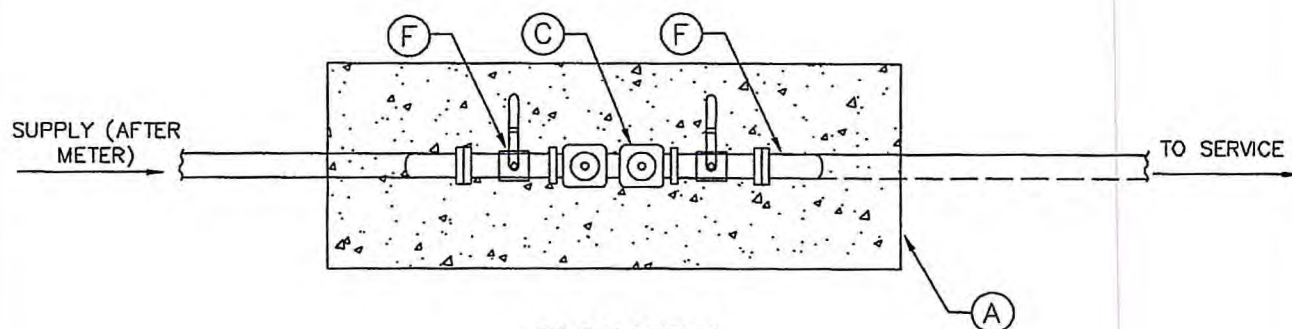
CITY OF WILDWOOD WATER DETAIL

REDUCED PRESSURE
BACKFLOW PREVENTER

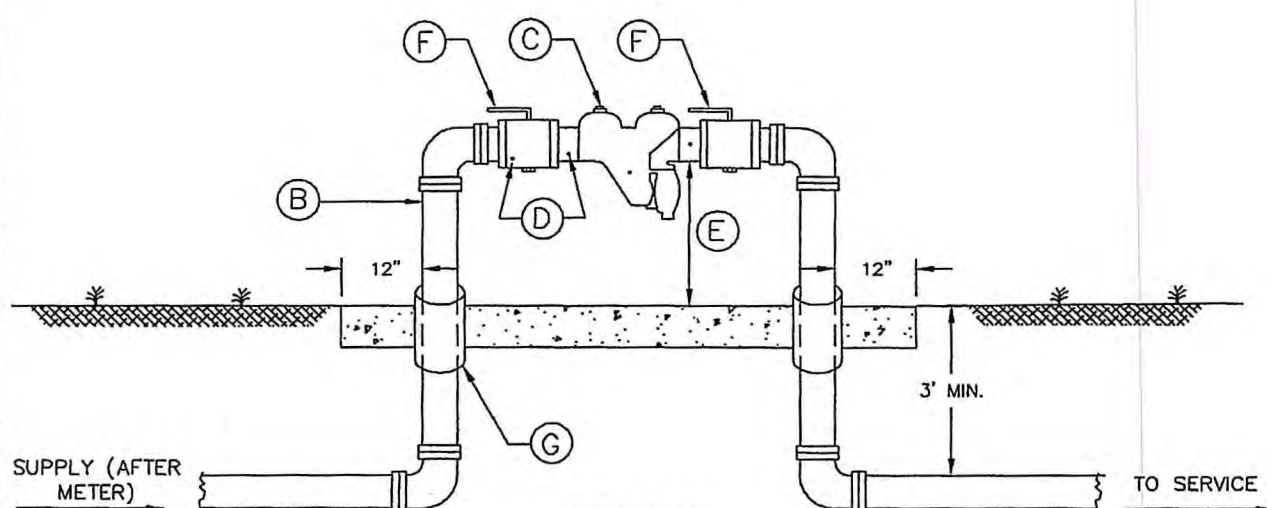
DETAIL NUMBER

W-17
1 OF 1

Drawing name: H:\CADD\AUTODESK\2007\Library\BLOCKS\Details\Wildwood\WATER\W-18 Double Check Backflow Preventer.dwg Model Mar 24, 2011 9:51am by: chris.melone



PLAN VIEW



SECTION

- (A) REINFORCED 4" THICK CONCRETE PAD WITH ONE LAYER 6"x6" WWF (3' WIDE)
- (B) TYPE "L" OR "K" HARD COPPER OR BRASS (NO GALVANIZED)
- (C) DOUBLE CHECK BACKFLOW PREVENTOR FEBCO MODEL 805Y OR APPROVED EQUAL
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- (G) SLEEVE AROUND PIPE TO PROTECT IT FROM CONCRETE

NOTES:

ALL RIGID PIPE AND FITTINGS, NO PVC ABOVE GROUND

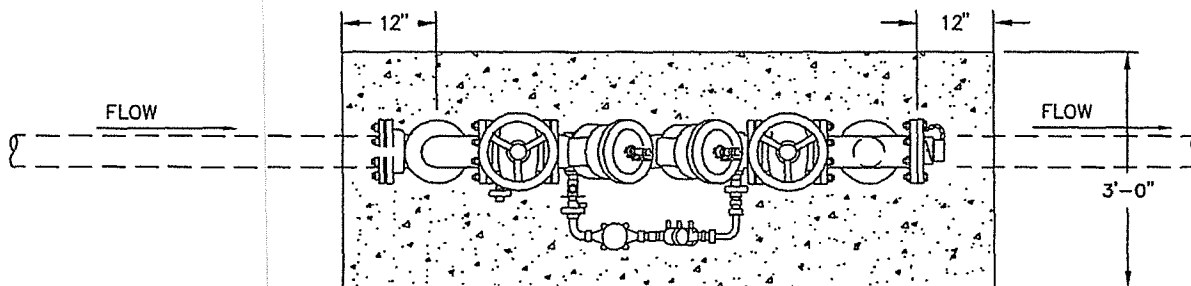


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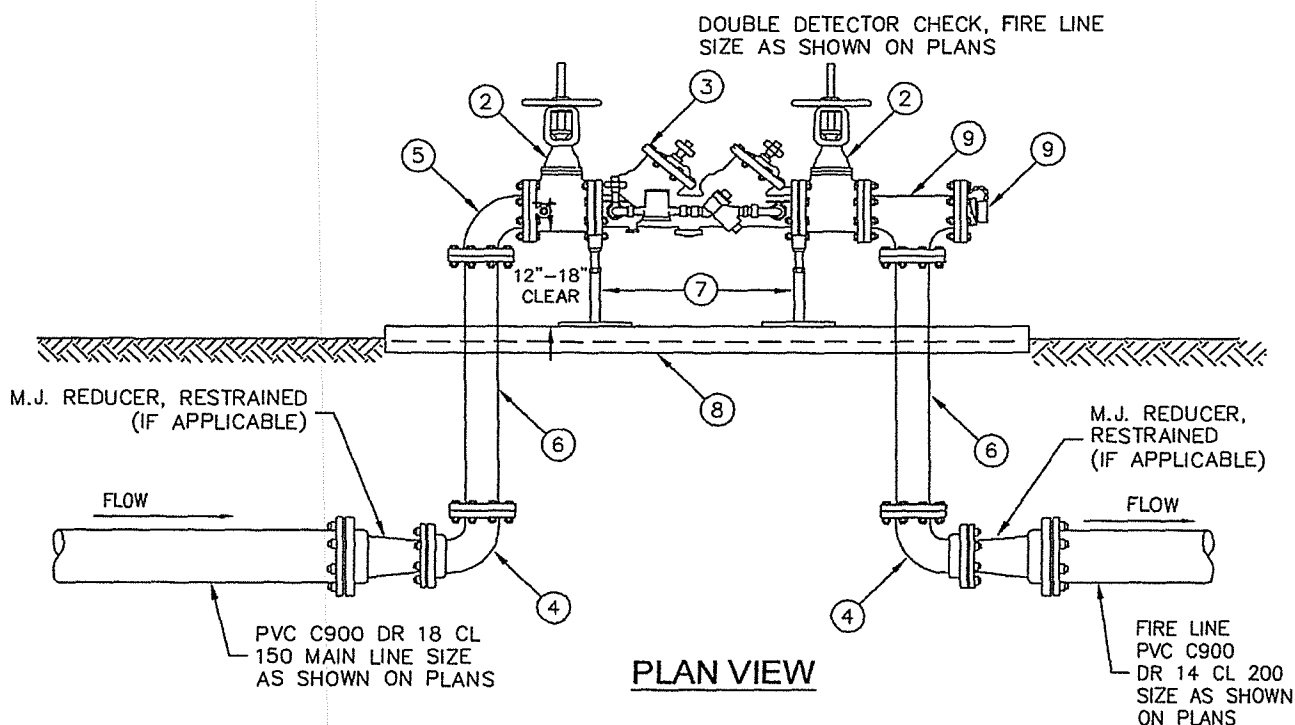
SCALE
NONE
LATEST REVISION
03-24-11

CITY OF WILDWOOD WATER DETAIL
**DOUBLE CHECK
BACKFLOW PREVENTER**

DETAIL NUMBER
W-18
1 OF 1



PLAN VIEW



PLAN VIEW

FIRE LINE BACKFLOW PREVENTER LEGEND

- | | |
|--|--|
| ① DISTRIBUTION SYSTEM RESTRAIN ONE (1) JOINT FROM FITTING IN EACH DIRECTION | ⑤ 90° BEND, FLANGED |
| ② GATE VALVE (RESILIENT SEAL), OS&Y, FLANGED, PROVIDE 3/4" GALVANIZED CHAIN AND PADLOCK FOR EACH VALVE.(SIZE PER PLAN) | ⑥ CLASS 53 DIP |
| ③ DOUBLE DETECTOR CHECK VALVE, HERSHEY DDC II OR EQUAL FIRE LINE SERVICE ONLY. (SIZE PER PLAN) | ⑦ CONCRETE PIPE SUPPORT |
| ④ 90° BEND, M.J., RESTRAINED (BELOW GRADE) | ⑧ CONCRETE SLAB, 6" THICK, No. 4 BARS, 12" OCEW WITH VISQUEEN VAPOR BARRIER. |
| | ⑨ TEE WITH FIRE DEPT. CONNECTION WITH CHECK VALVE. (SIZE PER PLAN) |



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SCALE
NONE
LATEST REVISION
03-24-11

CITY OF WILDWOOD WATER DETAIL

**FIRE LINE BACKFLOW
PREVENTER DEVICE**

DETAIL NUMBER

W-21

1 OF 1

City of Wildwood Water Department

Backflow Prevention Assembly

Test and Maintenance Report

100 North Main Street, Wildwood, FL 34785
(352) 330-1335 Ext. 108

1882

NAME: _____

SITE ADDRESS: _____

LOCATION OF ASSEMBLY: _____

TYPE OF ASSEMBLY: _____

MANUFACTURER: _____

DATE: _____

ACCOUNT #:

WATER METER #: _____

MODEL: _____

SIZE: _____

SERIAL #: _____

	CHECK VALVE 1	CHECK VALVE 2	DIFFERENTIAL PRESSURE RELIEF VALVE	PRESSURE VACUUM BREAKER
INITIAL TEST	LEAKED _____ RP _____ PSID CLOSED TIGHT _____	LEAKED _____ RP _____ PSID CLOSED TIGHT _____	OPENED AT _____ PSID REDUCED PRESSURE _____ DID NOT OPEN _____	1. AIR INLET OPENED AT _____ PSI 2. DID NOT OPEN _____ CHECK VALVE: LEAKED _____ HELD AT _____ PSI
R E P A I R S	_____ CLEANED _____ REPLACED _____ DISC _____ SPRING _____ GUIDE _____ PIN RETAINER _____ HINGE PIN _____ SEAT _____ DIAPHRAGM _____ OTHER _____ _____	_____ CLEANED _____ REPLACED _____ DISC _____ SPRING _____ GUIDE _____ PIN RETAINER _____ HINGE PIN _____ SEAT _____ DIAPHRAGM _____ OTHER _____ _____	_____ CLEANED _____ REPLACED _____ DISC UPPER _____ DISC LOWER _____ SPRING _____ DIAPHRAGM, LARGE _____ UPPER _____ LOWER _____ DIAPHRAGM, SMALL _____ UPPER _____ LOWER _____ SPACE, LOWER _____ OTHER, DESCRIBE	_____ CLEANED _____ REPLACED _____ RUBBER KIT _____ CASSEMBLY _____ OTHERDESCRIBE _____ _____ _____ _____ _____
FINAL TEST	RP _____ PSID CLOSED TIGHT _____	RP _____ PSID CLOSED TIGHT _____	OPENED AT _____ PSID REDUCED PRESSURE _____	AIR INLET _____ PSI CHECK VALVE _____ PSI

THE ABOVE REFERENCED BACKFLOW UNIT

PASSED ☐ FAILED ☐

FAILED ☐

BACKFLOW TEST KIT CERTIFICATION COMPANY:

TEST KIT MODEL #: _____ SERIAL #: _____ CALIBRATION DATE: _____

I HEREBY CERTIFY THIS DATA ON THE REFERENCED BACKFLOW UNIT IS ACCURATE AND REFLECTS THE PROPER OPERATION AND MAINTENANCE OF THE ASSEMBLY.

DATE/TIME OF TEST _____ DATE/TIME OF RETEST: _____ DATE/TIME OF REPAIR: _____

CERTIFIED TESTER SIGNATURE: _____

PRINT NAME: _____

TESTER CERTIFICATION #: _____

EXPIRATION DATE: _____

INSPECTION REPORT FORMAT IN ACCORDANCE WITH AWWA M-14, SECOND EDITION

Original – Water Dept.
Copy – City Hall
Revised 12/07